

June 5, 2007

TO: File

Thru: Susan White, Mining Program Coordinator

Thru: Daron Haddock, Permit Supervisor

From: Lynn Kunzler, Senior Environmental Scientist

RE: Review of Stipulated Agreement Submittal (received March 29, 2007), Tintic Utah Metals, Tintic Facility (Apex/Burgin), M/049/009, Task # 1758, Utah County, Utah

Primary focus of this review is compliance with the Stipulation for Continuance and for Dismissal of Notice of Agency Action, signed August 9, 2005, as amended. This required the operator to submit plans and maps, which show:

- Existing disturbances and facilities
- Any proposed facilities, dumps, waste piles, etc.
- Reclamation grade and contours
- Any revision to current approved plans
- Plans for handling and disposal of water encountered in the mine
- Plans for spoil or tailings disposal
- Provide reclamation cost estimate.

Deficiencies noted during the review are listed below.

Maps:

The disturbance maps do not have a label for all features, including buildings, dumps, stockpiles, benches, ponds, etc. Areas of historic disturbance for which Tintic Utah Metals, LLC does not have a responsibility to reclaim under the act should be identified and labeled. Access road spurs that will be reclaimed are not shown as part of the disturbed area. These items need to be included on the map. In a map legend, please show the acreage of dumps, stockpiles, ponds, and facility areas.

The reclamation maps do not show where different reclamation treatments will be used (i.e. grading of waste dumps, extent of road reclamation, etc. Please provide this information. Note, these maps also do not include the areas of disturbance as discussed above.

Please show on the maps, the areas for where variances have been approved. Also, as an appendix, please provide the original description, justification and approval documentation for the variances.

Reclamation cost estimate:

The reclamation cost estimate did not include costs for neutralization of acidic dumps, pond reclamation or adequate mobilization costs (the Division cannot assume Blue Rock and Haynes Excavating in Eureka would be awarded the reclamation or that they would not charge the State for Mobilization). Current 'third party' costs for equipment and labor were not used in the cost estimate.

Memo to File
M/049/009
June 5, 2007
Page 2

Attached is a revised cost estimate using current unit costs and tasks noted above. Most time units and acreages were verifiable. However, Time for labor and equipment for building demolition cannot be verified without dimensions of the buildings (height, width, length) Therefore, the demolition costs make a big assumption that the time for labor and equipment is correct. Because of this uncertainty, the attached estimate has included a 50% increase in the demolition costs. Once a verifiable basis is provided (i.e. building dimensions), then actual costs would be used.

The Division currently holds a reclamation surety for this site in the amount of \$430,400. Reclamation costs, based on assumptions and rates noted above, for current year is \$435,200, and escalated for the 5-year period (normal) is \$509,400.

Recommendations:

The operator needs to provide us with the revised maps and variance documentation as discussed above within the next 30 days.

The operator needs to provide the basis for the labor and equipment time estimates for demolition of the buildings and structures, or provide the dimensions of these facilities so we can verify the demolition costs.

The Operator should provide an additional \$79,000 surety to cover the 5-year escalation.

If the assumed demolition costs are verified, the Division has sufficient surety until 2010. This should satisfy the Stipulation for Continuance and for Dismissal of Notice of Agency Action. With this completed, the operator should then work with the Division to 'fine tune' the reclamation surety for the current and proposed new disturbances and a 5- year escalation.

RECLAMATION SURETY ESTIMATE

last revision -

5/22/2007

Mine Operator Tintic Utah Metals, LLC
Mine Name Apex/Burgen Mine
DOGM file Number M/049/009
Prepared by Utah State Division of Oil, Gas & Mining

Reclamation Details: Summary Page

Apex #2 Area	Page 2
Burgen #1 Area	Page 3
Burgen #2 Area	Page 4
Dry Stack Facility	Page 5
Zuma Clay Pit	Page 6

-Estimated total disturbed area for this mine = 84.3 Acres

Apex #2 Area	5.3
Burgen #1 Area	17.8
Burgen #2 Area	22.7
Dry Stack Facility	26.5
Zuma Clay Pit	12
Total Acres =	84.3

-Estimated reclamation cost for each area *

Apex #2 Mine Area	\$40,906.00
Burgen #1 Complex Area	\$93,087.00
Burgen #2 Complex Area	\$135,089.00
Dry Stack Facility	\$46,856.00
Zuma Clay Pit	\$33,701.00
Subtotal	\$349,639.00

*does not include mob/demob, supervision or contingency

Mobilization, supervision, contingency and escalation costs combined for all areas

Equipment mobilization	5 equip	2000	\$10,000.00
	Subtotal		\$359,639.00
Supervision -10% of estimate			\$35,963.90
	Subtotal		\$395,602.90
10% Contingency			\$39,560.29
	Subtotal		\$435,163.19
Escalate for 5 years at 3.20% per year			\$74,227.07
	Total		\$509,390.26

Rounded surety amount in year 2012 dollars

\$509,400.00

Average cost per disturbed acre = \$6,043

RECLAMATION SURETY ESTIMATE
Page 2

last revision 5/17/2007

Mine Operator: Tintic Utah Metals, LLC
Mine Name (Area): Apex #2
DOGM File Number: M/049/009

Reclamation Details: APEX #2

Facilities - Headframe, Hoist Building, Emergency Hoist Building, Dry Building and Office, Substation.
Shaft Closure,
No topsoil - amend with 10t/ac biosolids
85T/ac lime to nutralize dumps, disked into top 6 inches.
All facilities removed, spur roads reclaimed.
Dump regraded to 3h:1v slope
Demolition cost of buildings increased 50% due to non-verified lump sum cost.

-Estimated total disturbed area for this mine = 5.3 acres

Note: actual unit costs may vary according to site conditions

last unit cost update 10/25/06

Activity	Quantity	Units	\$/unit	\$	Note
Safety gates, signs, etc (mntls & installation)	1	sum	500	500	(1)
Demolition of buildings & facilities	1	lump sum	17214.00	25821	(2)
Regrading - D8R dozer COST PER HOUR	4.3	hour	247.43	1064	(7h)
Ripping access roads- D8R dozer	0.25	acre	288.00	72	0
Regrading access roads - D8R dozer	0.25	acre	697.18	174	0
Regrading waste dump slopes - D8R dozer	2000	CY	0.66	1320	(8)
Ripping stockpile & compacted areas - D8R dozer	5.3	acre	288.00	1526	(9)
Dump Nutralizing (85T/ac ag lime)	3	acre	850.00	2550	(00)
Disking Lime into top 6 inches	3	acre	30.00	90	(00)
Topsoil replacement - D8R dozer	263	CY	0.66	174	(8)
Sampling/testing	1	lump sum	500.00	500	
Ripping/Seedbed Prep - D8R dozer COST PER HOUR	5.3	acre	272.50	1444	(9h)
Mulching (1.5 ton/acre alfalfa/straw)	5.3	acre	300.00	1590	(00)
Fertilizing (100 lb/acre diammonium phosphate)	5.3	acre	100.00	530	(00)
Composted manure (10 ton/acre)	5.3	acre	350.00	1855	(00)
Broadcast seeding	5.3	acre	280.00	1484	(00)
General site cleanup & trash removal	5.3	acre	40.00	212	(00)
Subtotal of Reclamation Costs				\$40,906	
Equipment mobilization	2	equip	2000	4000	(00)
		Subtotal		44906	
Reclamation supervision -10% of reclamation estimate				4491	(15)
		Subtotal		49397	
10% Contingency				4940	
		Subtotal		54337	
Escalate for 5 years at 3.20% per year				9268	
		Total		63605	
Rounded surety amount in year 2012 dollars				\$63,600	

Average cost per disturbed acre = \$12,001

RECLAMATION SURETY ESTIMATE

last revision

5/17/2007

Page 3

Mine Operator: Tintic Utah Metals, LLC
 Mine Name (Area): Burgin #1
 DOGM File Number: M/049/009

Reclamation Details: Burgin #1

Facilities - Headframe, Hoist Building, Machine Shop, Wood Shop, Electrical Shop, Sand House, Dry Building,
 Substation, Fresh Water Storage Pond.

1 shaft closed

No Topsoil Available - amend soil materials with biosolids 10t/ac.

Dump regraded to 3h:1v slope

Warehouse to remain for post mining use

Demolition cost of buildings increased 50% due to non-verified lump sum cost.

-Estimated total disturbed area for this mine = 17.8 acres

Note: actual unit costs may vary according to site conditions

last unit cost update

10/25/06

Activity	Quantity	Units	\$/unit	\$	Note
Safety gates, signs, etc (mtls & installation)	1	sum	500	500	(1)
Demolition of buildings & facilities	1	lump sum	26500.00	39750	
Demolition & debris removal - general labor	192	hour	42.65	8189	(6)
Regrading - D8R dozer COST PER HOUR	18	hour	247.43	4454	(7h)
Regrading waste dump slopes - D8R dozer	19000	CY	0.66	12540	(8)
Ripping stockpile & compacted areas - D8R dozer	10.8	acre	288.00	3110	(9)
Soil Sampling/Testing	1	Lump Sum	1000.00	1000	
Ripping/Seedbed Prep - D8R dozer COST PER HOUR	18	hour	272.50	4905	(9h)
Mulching (1.5 ton/acre alfalfa/straw)	16.8	acre	300.00	5040	(00)
Fertilizing (100 lb/acre diammonium phosphate)	16.8	acre	100.00	1680	(00)
Composted manure (10 ton/acre)	16.8	acre	350.00	5880	(00)
Broadcast seeding	16.8	acre	280.00	4704	(00)
General site cleanup & trash removal	17.8	acre	75.00	1335	(00)
Subtotal of Reclamation Costs (for summary sheet)				\$93,087	
Equipment mobilization	4	equip	2000	8000	(8)
		Subtotal		101087	
Reclamation supervision -10% of reclamation estimate				10109	(15)
		Subtotal		111196	
10% Contingency				11120	
		Subtotal		122315	
Escalate for 5 years at 3.20% per year				20864	
		Total		143179	

Rounded surety amount in year 2012 \$

\$143,200

Average cost per disturbed acre = \$8,044

RECLAMATION SURETY ESTIMATE

last revision

5/17/2007

Page 4

Mine Operator: Tintic Utah Metals, LLC
 Mine Name (Area): Burgin #2
 DOGM File Number: M/049/009

Reclamation Details: Burgin #2

Facilities - Headframe, Hoist Building, Engineering & Admin. Offices, Mechanical Shop, Crushing Plant, 2 Ore Storage Bins,
 Concentrator (mill), Thickeners, Assay Building, Small Storage Building, Substation

2 shafts closed

Dump regraded to 3h:1v slope

No Topsoil Available - amend soil materials with biosolids 10t/ac.

Office, Lab and Shop to remain for post mining use.

Demolition cost of buildings increased 50% due to non-verified lump sum cost.

-Estimated total disturbed area for this mine = 22.7 acres

Note: actual unit costs may vary according to site conditions

last unit cost update

10/25/06

Activity	Quantity	Units	\$/unit	\$	Note
Safety gates, signs, etc (mtls & installation)	1	sum	500	500	(1)
Demolition of buildings & facilities	1	lump sum	44160.00	66240	
Regrading - D8R dozer COST PER HOUR	22	hour	247.43	5443	(7h)
Regrading waste dump slopes - D8R dozer	43000	CY	0.66	28380	(8)
Ripping stockpile & compacted areas - D8R dozer	11	acre	288.00	3168	(9)
Soil Sampling/Testing	1	Lump Sum	1000.00	1000	
Ripping/Seedbed Prep - D8R dozer COST PER HOUR	22	hour	272.50	5995	(9h)
Mulching (1.5 ton/acre alfalfa/straw)	22	acre	300.00	6600	(00)
Fertilizing (100 lb/acre diammonium phosphate)	22	acre	100.00	2200	(00)
Composted manure (10 ton/acre)	22	acre	350.00	7700	(00)
Broadcast seeding	22	acre	280.00	6160	(00)
General site cleanup & trash removal	22.7	acre	75.00	1703	(00)
Subtotal of Reclamation Costs (for summary sheet)				\$135,089	
Equipment mobilization	4	equip	2000	8000	(00)
		Subtotal		143089	
Reclamation supervision -10% of reclamation estimate				14309	(15)
		Subtotal		157398	
10% Contingency				15740	
		Subtotal		173138	
Escalate for 5 years at 3.20% per year				29533	
		Total		202670	
Rounded surety amount in year 2012 dollars				\$202,700	
Average cost per disturbed acre =			\$8,930		

RECLAMATION SURETY ESTIMATE

last revision

5/17/2007

Page 5

Mine Operator: Tintic Utah Metals, LLC
 Mine Name (Area): Dry Stack Tailings Facility
 DOGM File Number: M/049/009

Reclamation Details: Dry Stack Tailings Facility

Facilities: None
 Topsoil replacement depth - 1 foot
 Dump regraded to 3h:1v slope
 Vegetated sediment pond to remain post mining
 No more than 10 acres disturbed at any one time

-Estimated total disturbed area for this mine = 26.5 acres

Note: actual unit costs may vary according to site conditions

last unit cost update

10/25/06

Activity	Quantity	Units	\$/unit	\$	Note
Regrading tailings - D8R dozer	7	acre	697.18	4880	(7)
Tailings - Final Regrading - D8R dozer	7	acre	288.00	2016	(7h)
Ripping access roads- D8R dozer	0.5	acre	288.00	144	(9h)
Regrading access roads - D8R dozer	0.5	acre	697.18	349	(10)
Sampling/testing	1	lump sum	500.00	500	
Topsoil replacement - scraper	16200	CY	1.40	22680	(12)
Ripping topsoiled areas prior to seeding	10	acre	288.00	2880	(9)
Mulching (1.5 ton/acre alfalfa/straw)	10	acre	300.00	3000	(00)
Fertilizing (100 lb/acre diammonium phosphate)	10	acre	100.00	1000	(00)
Broadcast seeding	26.5	acre	280.00	7420	(00)
General site cleanup & trash removal	26.5	acre	75.00	1988	(00)
Subtotal of Reclamation Costs (for summary sheet)				\$46,856	
Equipment mobilization	2	equip	2000	4000	0
		Subtotal		50856	
Reclamation supervision -10% of reclamation estimate				5086	0
		Subtotal		55942	
10% Contingency				5594	
		Subtotal		61536	
Escalate for 5 years at 3.20% per year				10496	
		Total		72033	
Rounded surety amount in year 2012 dollars				\$72,000	

Average cost per disturbed acre = \$2,717

RECLAMATION SURETY ESTIMATE

last revision

5/17/2007

Page 6

Mine Operator: Tintic Utah Metals, LLC
 Mine Name (Area): Zuma Clay Pit
 DOGM File Number: M/049/009

Reclamation Details: Zuma Clay Pit

Facilities - None

1.2 acre access road reclaimed

topsoil replacement 6" on 5- acre expansion area = 8100 cy

Dump regraded to 3h:1v slope

North highwall benched

South highwall granted variance for reclamation

-Estimated total disturbed area for this mine = 12 acres

Note: actual unit costs may vary according to site conditions

last unit cost update

10/25/06

Activity	Quantity	Units	\$/unit	\$	Note
Regrading benches - D8R dozer	1	acre	557.00	557	(9)
Ripping waste dump tops - D8R dozer	2	acre	288.00	576	(9)
Ripping stockpile & compacted areas - D8R dozer	5	acre	288.00	1440	(9)
Ripping pit floors - D8R dozer	2	acre	288.00	576	(9)
Surface drainage restoration or construction	230	LF	5.00	1150	
Regrading/Ripping access roads - D8R dozer	1.2	acre	288.00	346	(9)
Topsoil replacement - scraper	8100	CY	1.40	11340	(10)
Seed bed preparation - ripping	12		288.00	3456	
Soil Sampling/Testing	1	Lump Sum	500.00	1000	
Mulching (1.5 ton/acre alfalfa/straw)	12	acre	300.00	3600	(00)
Fertilizing (100 lb/acre diammonium phosphate)	12	acre	100.00	1200	(00)
Composted manure (10 ton/acre)	12	acre	350.00	4200	(00)
Broadcast seeding	12	acre	280.00	3360	(00)
General site cleanup & trash removal	12	acre	75.00	900	(00)
Subtotal of Reclamation Costs (for summary sheet)				\$33,701	
Equipment mobilization	2	equip	1000	2000	0
		Subtotal		35701	
Reclamation supervision -10% of reclamation estimate				3570	0
		Subtotal		39271	
10% Contingency				3927	
		Subtotal		43198	
Escalate for 5 years at 3.20% per year				7368	
		Total		50566	
Rounded surety amount in year 2012 dollars				\$50,600	

Average cost per disturbed acre = \$4,214

NOTES

- (1) DOGM lump sum assumed
- (2) Means Heavy Construction Cost Data 2006, 02220-310-0100, Building Demolition, mix of types, avg., excluding dump fees

- (6) Means 2006 wage for building laborer, Crew A-1, incl. O & P
- (7) Means 2006 & Blue Book 2nd Half 2006, Cat Dozer, mtl 2550 lb/CY, 50 ft push, 2 ft depth
- (7h) Means 2006 & Blue Book 2nd Half 2006, Cat Dozer - size specified

- (8) Means 2006 & Blue Book 2nd Half 2006, Cat Dozer, mtl 2550 lb/CY, 100 ft push, 1 ft depth
- (9) Means 2006 & Blue Book 2nd Half 2006, Cat Dozer, multi shank rippers, speed 1.0 mph
- (9h) Means 2006 & Blue Book 2nd Half 2006, Cat Dozer, multi shank rippers, speed 1.0 mph

- (12) Means 2006 & Blue Book 2nd Half 2006: Cat 627G P-P, mtl 2550 lb/CY, 2,000 ft haul one-way, grade +/- 4%,

- (00) DOGM general estimate - lime \$10/t
- (00) DOGM general estimate - disking
- (00) DOGM general estimate - mulching
- (00) DOGM general estimate - fertilizing
- (00) DOGM general estimate - manure \$19/ton delivered, \$16 ton/acre spreading
- (00) DOGM general estimate - broadcast seeding

- (00) DOGM general estimate - site cleanup & trash removal
- (00) DOGM general estimate - equipment mobilization